

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A method for producing a CsX:Eu stimuable phosphor, wherein X represents Br, or a combination of Br and Cl, comprising the steps of:

- mixing CsX with an Europium compound selected from the group consisting of  $\text{EuX}'_2$ ,  $\text{EuX}'_3$  and  $\text{EuOX}'$ , X' being selected from the group consisting of F, Cl, Br, I and combinations thereof,
- heating said mixture at a temperature above  $450^\circ\text{C}$ ,
- cooling said mixture, and
- optionally recovering the CsX:Eu phosphor.

2. (Original) A method according to claim 1, wherein between  $10^{-3}$  and 5 mol % of said Europium compound is mixed with said CsX.

3. (Original) A method according to claim 1, wherein between  $10^{-1}$  and 3 mol % of said Europium compound is mixed with said CsX.

4. (Original) A method according to claim 1, wherein X' is a member selected from the group consisting of Cl and Br.

5. (Original) A method according to claim 2, wherein X' is a member selected from the group consisting of Cl and Br.

6. (Original) A method according to claim 3, wherein X' is a member selected from the group consisting of Cl and Br.

7. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 1.

8. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 2.

9. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 3.

10. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 4.

11. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 5.

12. (Original) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to claim 6.

13. (Original) A method for producing a binderless phosphor screen comprising the steps of

- producing a CsX:Eu phosphor with the method of claim 1 and
- depositing said phosphor on a substrate by a method selected from the group consisting of physical vapor deposition, chemical vapor deposition or an atomization technique.

14. (Previously Presented) A method for manufacturing a binderless phosphor screen on a substrate containing a CsX:Eu stimuable phosphor, wherein X represents a halide selected from the group consisting of Br, Cl and combinations thereof comprising the steps of:

- bringing heatable multiple containers of CsX and an Europium compound selected from the group consisting of  $\text{EuX}_2$ ,  $\text{EuX}_3$  and  $\text{EuOX}'$ ,  $\text{X}'$  being selected from the group consisting of F, Cl, Br, I and combinations thereof, together with the substrate; and
- depositing, by a method selected from the group consisting of physical vapor deposition, chemical vapor deposition or atomization technique, both said CsX and said Europium compound on a substrate in such a ratio that on said substrate a CsX phosphor, doped with between  $10^{-3}$  and 5 mol% of Europium, is formed.

15. (Previously Presented) A method for manufacturing a phosphor screen containing a CsX:Eu stimuable phosphor, wherein X represents a halide selected from the group consisting of Br and Cl comprising the steps of:

- mixing CsX with between  $10^{-3}$  and 5 mol% of an Europium compound selected from the group consisting of  $\text{EuX}'_2$ ,  $\text{EuX}'_3$  and  $\text{EuOX}'$ , X' being selected from the group consisting of F, Cl, Br, I and combinations thereof,
- bringing said mixture in a container together with a substrate, and
- depositing said mixture on the substrate by a method selected from the group consisting of physical vapor deposition, chemical vapor deposition or atomization technique.

16. (Original) A method for recording and reproducing images of objects made by high energy radiation comprising:

- exposing a panel with X-ray radiation, said panel comprising a  $\text{CsX:Eu}$  stimutable phosphor, wherein X represents a halide selected from the group consisting of Br, Cl and combinations thereof, including between  $10^{-3}$  and 5 mol% of an Europium dopant, said dopant originating from an Europium compound selected from the group consisting of  $\text{EuX}'_2$  and  $\text{EuX}'_3$  and  $\text{EuOX}'$ , X' being selected from the group consisting of F, Cl, Br, I and combinations thereof,
- stimulating said panel with radiation having a wavelength between 500 nm and 1100 nm thereby releasing stimulated radiation and
- collecting said stimulated radiation.

17. (Original) A phosphor of the formula  $\text{CsBr}_a\text{Cl}_b\text{:Eu}$  where  $a + b = 1$ , and a ranges from about 0.99 to about 0.8 and b ranges from about 0.01 to about 0.2.

18. (Currently Amended) The phosphor of claim ~~45~~ 17, wherein a ranges from about 0.99 to about 0.95 and b ranges from about 0.01 to about 0.05.

19. (Canceled)

20. (Previously Presented) A  $\text{CsX:Eu}$  compound prepared according to one of the methods of claims 1, 2, 3, 4, 5 or 6.

21. (Currently Amended) A phosphor ~~characterised~~ characterized by the formula  $\text{CsX:Eu}$ , wherein X is selected from the group consisting of Br, Cl and combinations thereof and said phosphor exhibiting, when excited with radiation of 254 nm, a blue photoluminescence and a red photoluminescence wherein said blue

photoluminescence has ~~an~~ a power (Watt) at least 100 times higher than said red photoluminescence.

22. (Original) The phosphor of claim 21, wherein X is Br.

23. (Original) A binderless phosphor screen comprising a CsX:Eu stimuable phosphor according to claim 21.

24. (Original) A binderless phosphor screen comprising a CsX:Eu stimuable phosphor, according to claim 22.

25. (Previously Presented) A method for producing a CsX:Eu stimuable phosphor, wherein X represents a halide selected from the group consisting of Br, Cl and combinations thereof, comprising the steps of:

- mixing CsX with between  $10^{-3}$  and 5 mol% of an Europium compound selected from the group consisting of  $\text{EuX}'_2$ ,  $\text{EuX}'_3$  and  $\text{EuOX}'$ , X' being selected from the group consisting of F, Cl, Br, I and combinations thereof,
- heating said mixture at a temperature above  $450^\circ\text{C}$ ,
- cooling said mixture, and
- optionally recovering the CsX:Eu phosphor.

26. (Previously Presented) The method of claim 25 wherein X' is a member selected from the group consisting of Br and Cl.

27. (Previously Presented) The method of claim 25 wherein between  $10^{-1}$  and 3 mol% of said Europium compound is mixed with said CsX.

28. (Previously Presented) The method of claim 27 wherein X' is a member selected from the group consisting of Br and Cl.

29. (Previously Presented) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to the method of claim 25.

30. (Previously Presented) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to the method of claim 26.

31. (Previously Presented) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to the method of claim 27.

32. (Previously Presented) A binderless phosphor screen containing a CsX:Eu phosphor prepared according to the method of claim 28.

33. (Previously Presented) A method for producing a binderless phosphor screen comprising the steps of:

- producing a CsX:Eu phosphor according to the method of claim 25, and
- depositing said phosphor on a substrate by a method selected from the group consisting of physical vapor deposition, chemical vapor deposition or an atomization technique.

34. (Previously Presented) A CsX:Eu compound prepared according to claim 25.